## Claims

- 1. A nucleic acid molecule coding for a human ClCkb protein comprising a genetic alteration at amino acid position 481 compared to the wild type, as well as for corresponding segments thereof.
- 2. The nucleic acid molecule according to claim 1, wherein said genetic alteration is an amino acid exchange.
- 3. The nucleic acid molecule according to claim 2, wherein by said amino acid exchange a threonine molecule is changed for a serine molecule ( $ClCKb^{T4818}$ ).
- 4. A nucleic acid molecule which binds to the nucleic acid molecule according to claim 1 under stringent conditions.
- 5. A nucleic acid molecule which binds to the nucleic acid molecule according to claim 4 under stringent conditions.
- 6. A (poly)peptide encoded by the nucleic acid molecule according to claim 1.
- 7. A (poly)peptide encoded by the nucleic acid molecule according to claim 2.
- 8. A (poly)peptide encoded by the nucleic acid molecule according to claim 3.

- 9. A method for diagnosing hypertension, and/or allergy, and/or hair loss, and/or liability for infection, of a human being, or a predisposition therefor, comprising the steps of:
  - (a) Providing a biological sample of said human being;
- (b) Analyzing said biological sample for the presence of a nucleic acid molecule or/and a (poly)peptide, and
- (c) correlation of positive findings to hypertension, and/or allergy, and/or hair loss, and or liability for infection, or a predisposition therefor,

wherein said nucleic acid molecule in step (b) is selected from the group consisting of: the nucleic acid molecule according to claim 1, 2, 3, and 4; and/or said (poly)peptide is selected from the group consisting of: the (poly)peptide according to claim 6, 7, and 8.

- 10. The method according to claim 9, wherein said analyzing for the presence of said nucleic acid molecule in step (b) is performed by means of PCR technology.
- 11. The method according to claim 10, wherein the PCR amplification products are analyzed by means of denaturing high pressure liquid chromatography (dHPLC).
- 12. A method for identifying substances modulating activity of a peptide derived from ClCKb protein that is genetically altered at amino acid position 481 compared to the wild type, comprising the steps of:
- (a) contacting of said peptide to a test substance, under conditions allowing the binding of said test substance to said peptide, and

- (b) determination, whether said test substance modulates the activity of said peptide.
- 13. The method according to claim 12, wherein said genetic alteration is an amino acid exchange.
- 14. The method according to claim 13, wherein by said amino acid exchange a threonine molecule is changed for a serine molecule ( $ClCKb^{T4818}$ ).
- 15. The method according claim 12, wherein said determination in step (b) is performed via ion current measurements, preferably via chloride ion current measurements, across a biological cell membrane.
- 16. The method according to claim 15, wherein said ion current measurements are performed via patch clamp and/or voltage clamp technology.
- 17. The method according to claim 15, wherein in step (b) it is determined whether said test substance inhibits ion current across said biological cell membrane.
- 18. A substance for modulating activity of a peptide derived from ClCKb protein that is genetically altered at amino acid position 481 compared to the wild type, identified by means of the method according to claim 12.
- 19. A method for preparing a pharmaceutical composition, comprising the steps of:

- (a) providing a substance modulating activity of a peptide derived from ClCKb protein that is genetically altered at amino acid position 481 compared to the wild type, and
- (b) formulating said substance into a pharmaceutically acceptable carrier,

wherein step (a) is performed by means of the method according to claim 12.

- 20. The method according to claim 19, wherein said pharmaceutical composition is destined for treating hypertension, and/or allergy, and/or hair loss, and/or liability for infection, of a human being.
- 21. A pharmaceutical composition prepared by the method according to claim 19.
- 22. A method for treating a human being affected by hypertension, and/or allergy, and/or hair loss, and/or liability for infection, comprising the steps of:
- (a) providing a genetic construct coding for an antisense-ClCKb<sup>T4818</sup> probe and/or for a ClCKb<sup>T4818</sup>-RNAi, and
- (b) introducing said construct into a human being by means of gene therapeutic methods.
- 23. The method according to claim 22, wherein said construct is selected from the group consisting of: naked DNA or cDNA, naked RNA or cRNA, plasmid DNA, plasmid RNA, vector RNA, non-virulent/non-pathogenic virus, and transformed bacteria.

- 24. A method for preparing a pharmaceutical composition for treatment of hypertension, and/or allergy, and/or hair loss, and or liability for infection, comprising the steps of:
- (a) providing a genetic construct coding for antisense ClCkb<sup>T481S</sup>, and/or ClCkb<sup>T481S</sup>-RNAi, and
- (b) formulating said construct into a pharmaceutically acceptable carrier.
- 25. A pharmaceutical composition prepared by the method according to claim 24.
- 26. A pharmaceutical composition comprising a genetic construct coding for antisense ClCKbT4815, and for ClCKbT4815-RNAi, and a pharmaceutically acceptable carrier.